Un-Notified Variations in Airspeed

Mach Speed Variation

- The FAA has presented papers at IPACG and ISPACG which outline the dangers of unannounced speed changes.
- This issue needs a Global or Regional Procedure developed.
- At the last ISPACG Meeting all agreed to continue the trial procedure.

ICAO Annex 2 3.6.2.2 change

3.6.2.2 *Deviations from the current flight plan.* In the event that a controlled flight deviates from its current flight plan, the following action shall be taken:

a) *Deviation from track:* if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to

regain track as soon as practicable.

b) *Deviation from ATC assigned Mach number/indicated airspeed:* the appropriate air traffic services unit shall be

informed immediately.

c) *Deviation from Mach number/true airspeed:* if the sustained Mach number/true airspeed at cruising level varies by

plus or minus Mach 0.02 or more, or plus or minus 19 km/h (10 kt) true airspeed or more from the current flight plan, the appropriate air traffic services unit shall be so informed.

Speed Change NOTAM

- A1445/15 - ATTN ALL AIRCREWS-NEW PROCEDURAL REQUIREMENT FOR FLIGHTS OPERATING IN OAKLAND OCEANIC CONTROL AREA (KZAK). IN ORDER TO SUPPORT COST INDEX OR ECON SPEEDS AND MAINTAIN ATC SEPARATION SPACING AIRCREWS ARE REQUIRED TO USE THE FOLLOWING PROCEDURES IN THE KZAK FIR. A PILOT MUST INFORM ATC VIA VOICE OR CPDLC EACH TIME THE CRUISING MACH NUMBER VARIES OR IS EXPECTED TO VARY BY A VALUE EQUAL TO OR GREATER THAN 0.02 MACH FROM:
- (1) THE MACH NUMBER AT FIR ENTRY; OR
- (2) ANY SUBSEQUENT SPEED CHANGE NOTIFIED TO ATC IN FLIGHT
- IF YOU HAVE ANY QUESTIONS CONTACT DUSTIN BYERLY(510)745-3543. 15 APR 00:01 2015 UNTIL 15 OCT 00:01 2015.

Speed Change Procedure

- Procedurally when an aircraft wants to change by .02 Mach number (or more), they will downlink DM18 with the requested speed (Mach number).
- If ATC requires a speed assignment for separation, an appropriate speed assignment would be assigned ie UM106 MAINTAIN *Speed.*
- If ATC did not require a speed assignment, the following could be Uplinked:
- UM ROGER
- UM169 Speed change to M0.84 approved
- This advises the aircraft that the requested speed change is approved but no speed restriction has been assigned.

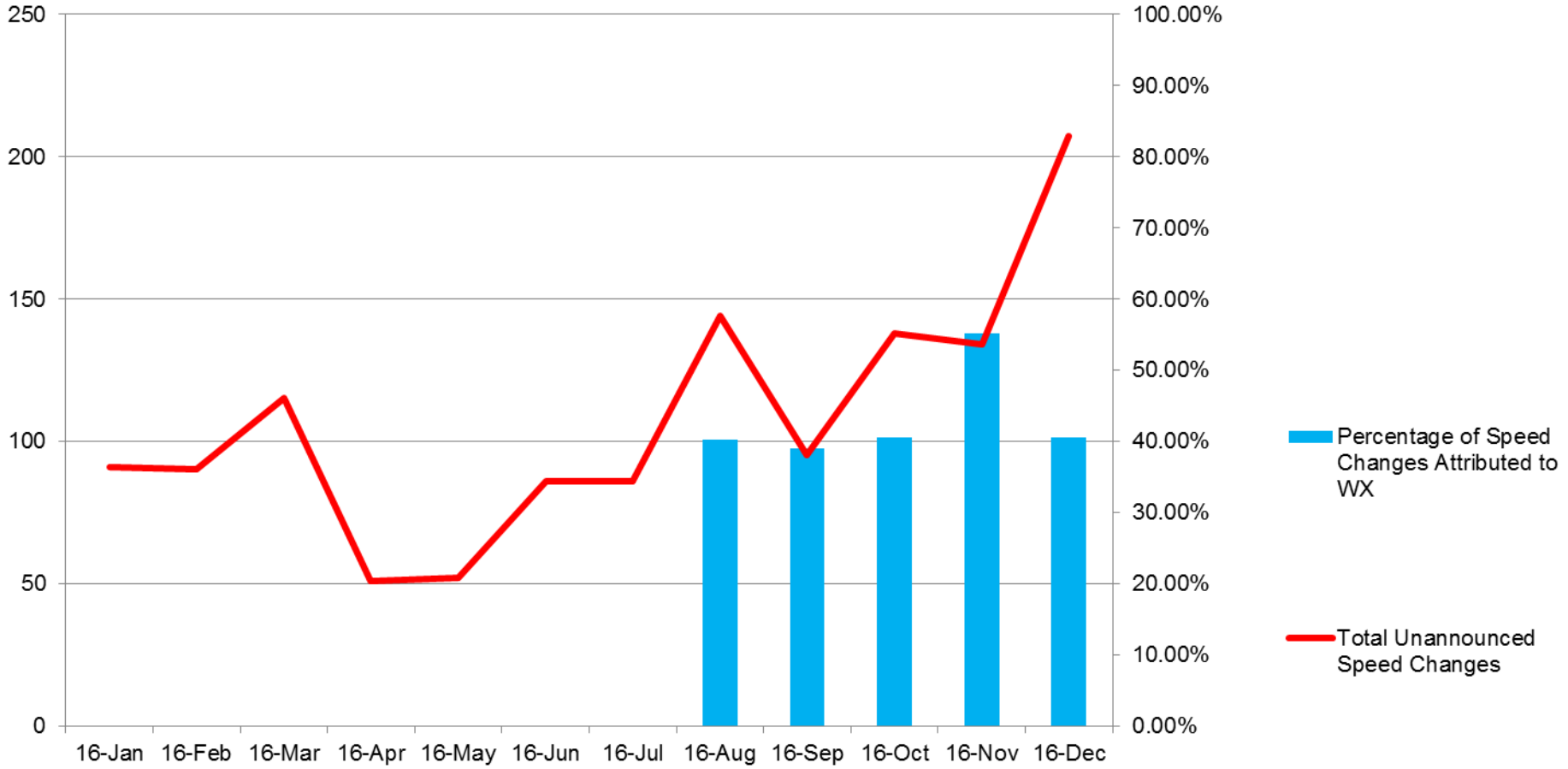
Speed Change Procedure

- 2051Z-FDX60: REQUEST M084, DUE TO AIRCRAFT PERFORMANCE
- 2056Z- ATC: SPEED CHANGE TO M84 APPROVED
- 2056Z-FDX60: ROGER
- 2142Z-FDX60: REQUEST M080, DUE TO TURB
- 2142Z-ATC: MAINTAIN M080
- 2143Z-FDX60: WILCO
- 2242Z-FDX60: REQUEST M084
- 2244Z- ATC: SPEED CHANGE TO M84 APPROVED
- 2244Z- FDX60: ROGER

Monitoring Trial Effectiveness

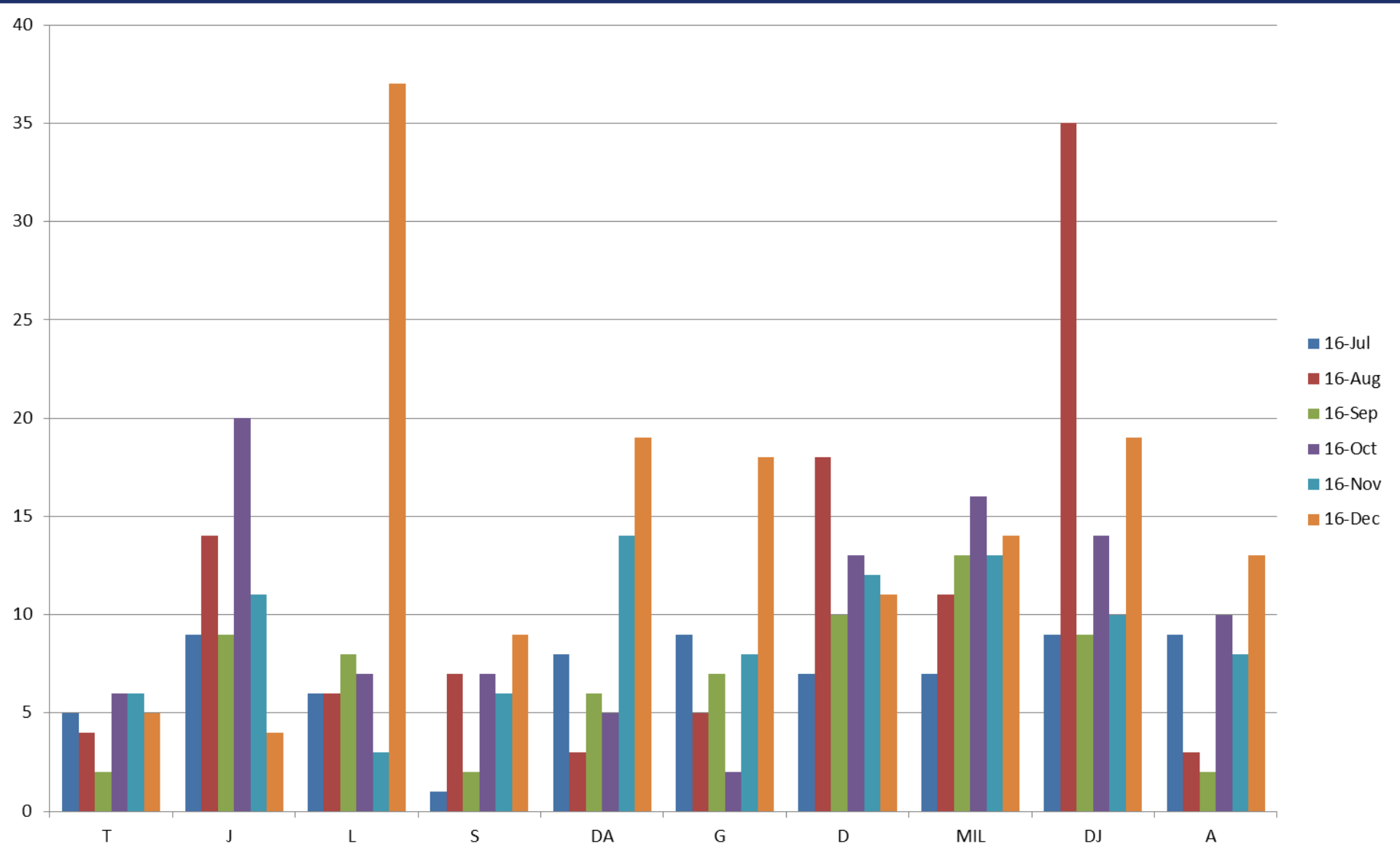
- Each Month starting in April 2015, 10 days of Mach speed change data is examined.
- Mach Speed changes of M.04 or greater are examined to see if a Mach Speed change was requested or advised.
- From the beginning of this effort until now the trend is still not where it needs to be.

UNANNOUNCED SPEED CHANGES of M.04 or GREATER



Monitoring Trial Effectiveness

- Several Operators are not following the procedure.
- The chart below shows the number of un-announced speed changes for the 10 days of each month.
- The data in the next chart is the last 6 months of 2016 worth of data.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16-Oct
16-Nov
16-Dec

Speed Changes associated with Wx

- **The data shows that in many cases weather was a factor for those flights.**
  - CPDLC messages in the time frame of the speed change indicate SIGMET notifications, Turbulence AIREPs or Weather Deviation requests.
- **Many Aircraft are making a CPDLC request at the time of the speed change. The aircrew should include a speed change request with their other request.**

Conclusion

- The data so far indicates that aircrews are not fully complying with the procedure.
- Oakland will work to raise pilots' awareness and compliance with the procedure.
- The data has been given to FAA Flight Standards, IATA and IFALPA to help gain operator compliance.
- Flight Standards Inspectors will be contacting operators to get them to comply with the procedure.
- Hopefully by continuing this effort we will gain compliance before the issue is required to be elevated to the next level.

IFALPA
The Global Voice of Pilots

Safety Bulletin

16SAB07 12 October 2016

Oakland (KZAK) Oceanic ATC Operations VARIATIONS IN AIRSPEED IN CONTROLLED AIRSPACE

Issues have been reported with the implementation of operator procedures for unannounced speed changes within the Pacific Oceanic Flight Information Regions that have resulted in the reduction of the required separation minima.

The following procedure is in force:

A1613/16 - ATTN ALL AIRCREWS -NEW PROCEDURAL REQUIREMENT FOR FLIGHTS OPERATING IN OAKLAND OCEANIC CONTROL AREA (KZAK) IN ORDER TO SUPPORT COST INDEX OR ECON SPEEDS AND MAINTAIN ATC SEPARATION SPACING AIRCREWS ARE REQUIRED TO USE THE FOLLOWING PROCEDURES IN THE KZAK FIR. A PILOT MUST INFORM ATS EACH TIME THE CRUISING MACH NUMBER VARIES OR IS EXPECTED TO VARY BY A VALUE EQUAL TO OR GREATER THAN 0.02 MACH FROM:

NATIONAL Fast Read
A Publication of the Air Line Pilots Association, International
October 26, 2016

Safety and Security

UNANNOUNCED SPEED CHANGES ARE IMPACTING KZAK OCEANIC OPERATIONS

Issues with unannounced speed changes have resulted in numerous reductions in separation or loss of required separation within the Oakland (KZAK) FIR. In order to improve utilization of the airspace and to ensure that separation between successive aircraft does not decrease below the established minima, a NOTAM (A1613/16) for the KZAK Oceanic Control Area has been issued.

A pilot must inform ATC each time your cruising MACH number varies or is expected to vary by a value equal to or greater than 0.02 MACH from:

- The MACH number at the FIR entry or
- Any subsequent speed change notified to ATC in flight.

Aircraft operating in the Pacific FIRs using an ADS-C reporting rate of 14 minutes and FANS 1/A can be separated by as little as 30 NM laterally and longitudinally, causing ATC separation to quickly erode before ATC receives the next ADS-C report. ALPA recommends flight crews follow the NOTAM reporting requirements and contact ATC with their MACH number prior to entering the FIR and notify ATC for any speed change 0.02 or greater while operating inside the KZAK FIR.
Further information is provided on the IFALPA website. Please direct questions and concerns to Engineering and Air Safety at EAS@alpa.org or 800-424-2470

Action by the Meeting

- The meeting is invited to note the information provided
- Work together with ANSPs to eliminate unannounced speed changes
- Recommend to the regulatory bodies of each Pacific ANSP to publish a SAFO or equivalent that highlights to operators the important safety implications of unannounced speed changes

Questions

Dustin Byerly

Oakland ARTCC

510-745-3543